

OE Introduces EAGLE-I

In January, OE's energy infrastructure monitoring capability was officially given the name Environment for Analysis of Geo-Located Energy Information (EAGLE-I). Through EAGLE-I, OE's Infrastructure Security and Energy Restoration (ISER) division has developed the capability to monitor the Nation's energy infrastructure in near real-time and to geospatially map energy assets and systems, tying together a variety of data sources into one visualization platform. EAGLE-I provides ISER staff with automated alert notifications when abnormal conditions are detected. Through e-mail, text messaging, or other means, this built-in analytical capability provides notifications directly to ISER staff when a potential anomaly is detected on the electric grid or within the petroleum or natural gas network.

Deputy Assistant Secretary
ISER



William N. Bryan

Director
Infrastructure Reliability
ISER



Stewart Cedres



OE/ISER employee Maggie Scott demonstrating EAGLE-I

Housed in the Energy Response Center (ERC) at DOE Headquarters, EAGLE-I is comprised of two components: the ERC Dashboard and the ERC Mapper. The ERC Dashboard is operationally focused and pulls from dynamic datasets to provide the user with near real-time information feeds. The Dashboard provides coverage of the entire electric grid, the Nation's petroleum and natural gas networks, as well as the movements of fuel. Important ERC Dashboard features include the National Outage Map (NOM), the natural gas pipelines critical notices postings page, and the petroleum supply and storage selection. Dashboard features are continually refined based upon user feedback, and as new data sources and types of information are identified, they are incorporated into the system, providing additional capabilities.

The ERC Mapper portion of EAGLE-I has a more static focus and allows the user to display components of the Nation's energy infrastructure. Mapping functionality within EAGLE-I also incorporates the ability to add real-time weather hazards for earthquakes, floods, hurricanes, volcanoes, and wildfires as well as weather watches and warnings. This information comes directly from the U.S. Geological Survey (USGS) and the National Oceanic and Atmospheric Administration (NOAA).

EAGLE-I is an important capability that allows DOE to monitor the Nation's infrastructure across multiple energy sectors and also serves to enhance situational awareness of potential disruptions and other critical issues that could impact energy systems.

OE Honored with Innovation Award

The DOE Emergency Support Function 12 (ESF-12) Response Team was selected as this year's recipient of the Innovation Award by the Federal Government Distance Learning Association (FGDLA). Having developed a robust training program specifically for responders who are responsible for facilitating the restoration of power to areas decimated by disasters, OE was recognized for its development and application of emerging distance learning technologies that support the Federal Government.



DOE's ESF-12 Training Team with
the Innovation Award



DOE Partners with DoD to Host Preparedness and Response Workshop

On March 14, 2012, DOE, in coordination with the Department of Defense, hosted a Regional Energy Preparedness and Response Workshop at Dover Air Force Base in Dover, Delaware.

DOE, as the lead Federal agency responsible for coordinating the Energy Sector's emergency preparedness requirements, and the designated Federal Sector-Specific Agency, directs energy emergency support function activities for the Energy Sector during emergencies. One of DOE's primary responsibilities is to work with stakeholders to build and enhance communication and coordination before, during, and after a major disaster. The workshop was conducted to provide a forum in which stakeholders could share best practices and identify and discuss the predominant issues that may obstruct response and restoration activities.



Colonel Mark Camerer and Deputy Assistant Secretary William Bryan both delivered opening remarks, highlighting the importance of interagency partnership. Following energy emergency preparedness and response presentations by DOE, and state, local, and private sector participants, the rest of the morning was devoted to a panel discussion. Discussions on topics such as restoration priorities, public messaging, and mutual assistance, were designed to identify how regional energy owners and operators and all levels of government can work together more effectively and efficiently during emergencies. Panel participants included representatives from the Dover Air Force 436th Civil Engineer Squadron,

Delaware's Division of Energy and Climate, the Delaware Emergency Management Agency, the City of Dover Electric Department, Delaware Electric Cooperative, and Delmarva Power/Pepco. The afternoon was dedicated to a criticality and interdependency tour at Dover Air Force Base, followed by an energy infrastructure tour around the Dover region, including a stop at a 10 MW solar farm.

The day before the workshop, OE held its annual Regional Coordinator Meeting at Dover. OE has a Regional Coordinator assigned to each of the ten FEMA regions who serve as the primary points of contact for all energy-related activities within their region and develop in-depth knowledge of critical regional energy infrastructure. The group met to discuss Presidential Policy Directive 8 (PPD-8) – National Preparedness, revisions to the National Response, Recovery, and Mitigation Frameworks as well as Lessons Learned from Hurricane Irene and the Northeast Winter Storm.

DOE Tests New Electric Power Monitoring Capability at HHS Sites

DOE recently embarked on an important pilot program with the U.S. Department of Health and Human Services (HHS) to test a new electric power monitoring capability. This pilot involves the installation of Frequency Disturbance Recorders (FDRs) to monitor the power status at critical government health facilities. FDRs are GPS-synchronized devices which continuously monitor the electric grid frequency, voltage, and phase angle, and together, these attributes can be used to monitor the health of the electric grid. In January, DOE successfully deployed the first three FDRs at HHS sites.

Frequency Monitoring Network (FNET), a wide-area power system frequency measurement system, uses FDRs which provide government and academia with data to develop advanced concepts in power system analysis. As a byproduct of this wide-area monitoring and data collection, FDRs can be used to actually monitor the status of power at a facility. Since the unit is continuously monitoring the power quality, it can detect whether the power is on or off. Additionally, the University of Tennessee, with partial funding from DOE, developed an algorithm that can determine if a facility is connected to the grid or is running on an isolated power source.

PPD-8 Update

The first annual National Preparedness Report was delivered to the President on March 30, 2012. The report summarizes the progress made toward building, sustaining, and delivering the core capabilities described in the National Preparedness Goal, and was produced in coordination with other executive departments and agencies and in consultation with state, local, tribal, and territorial governments, the private and nonprofit sectors, and the public. See <http://www.fema.gov/prepared/ppd8.shtm> for further information.

The pilot project not only involves the instrumentation of a number of health care-related facilities, but also the development of methods for alerting the appropriate response officials in the event of a disruption. Alerts will initially be delivered as targeted e-mail notifications describing the details of a particular disturbance, and eventually, through the integration of FDR feed information into each agencies' emergency management dashboard systems as well.